

08 OCT 2004

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number  
WO 03/086945 A2(51) International Patent Classification<sup>7</sup>:

B67B

SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/DK03/00241

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date:

10 April 2003 (10.04.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PA 2002 00536 10 April 2002 (10.04.2002) DK  
PA 2002 01289 2 September 2002 (02.09.2002) DK**Declarations under Rule 4.17:**

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *without international search report and to be republished upon receipt of that report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



A2

(54) Title: TUBE WITH SELF-CLOSING MECHANISM FOR LIQUID CONTAINER

WO 03/086945

(57) **Abstract:** The invention relates to a tube for application for a container with a built-in pump, in which the tube possesses an internal cross section of an inside for flow of aliquid, an external cross section of the tube, which is larger than the internal cross section, a first end with a first opening for intake of the liquid, and where the first end encompasses fastening means for fastening of the tube on the container and another end with an opening part encompassing another opening for discharge of the liquid. The other end additionally encompasses a barrier part, where the barrier part edges towards the opening parts, so that it blocks for the other opening. At least the barrier part of the opening part is made from an elastic material, so that the liquid can be pressed out through the other mentioned opening passing the barrier part after a deformation of at least the barrier part or the opening part. In this way a closing mechanism is obtained, which prevents contamination with microorganisms and prevents impurities from penetrating into the tube of the container. The closing mechanism may be manufactured economically. Besides the opportunity is obtained for adjusting the velocity of the pumped out liquid as well as for pumping out the liquid in the form of a drop, each time the pump is activated.